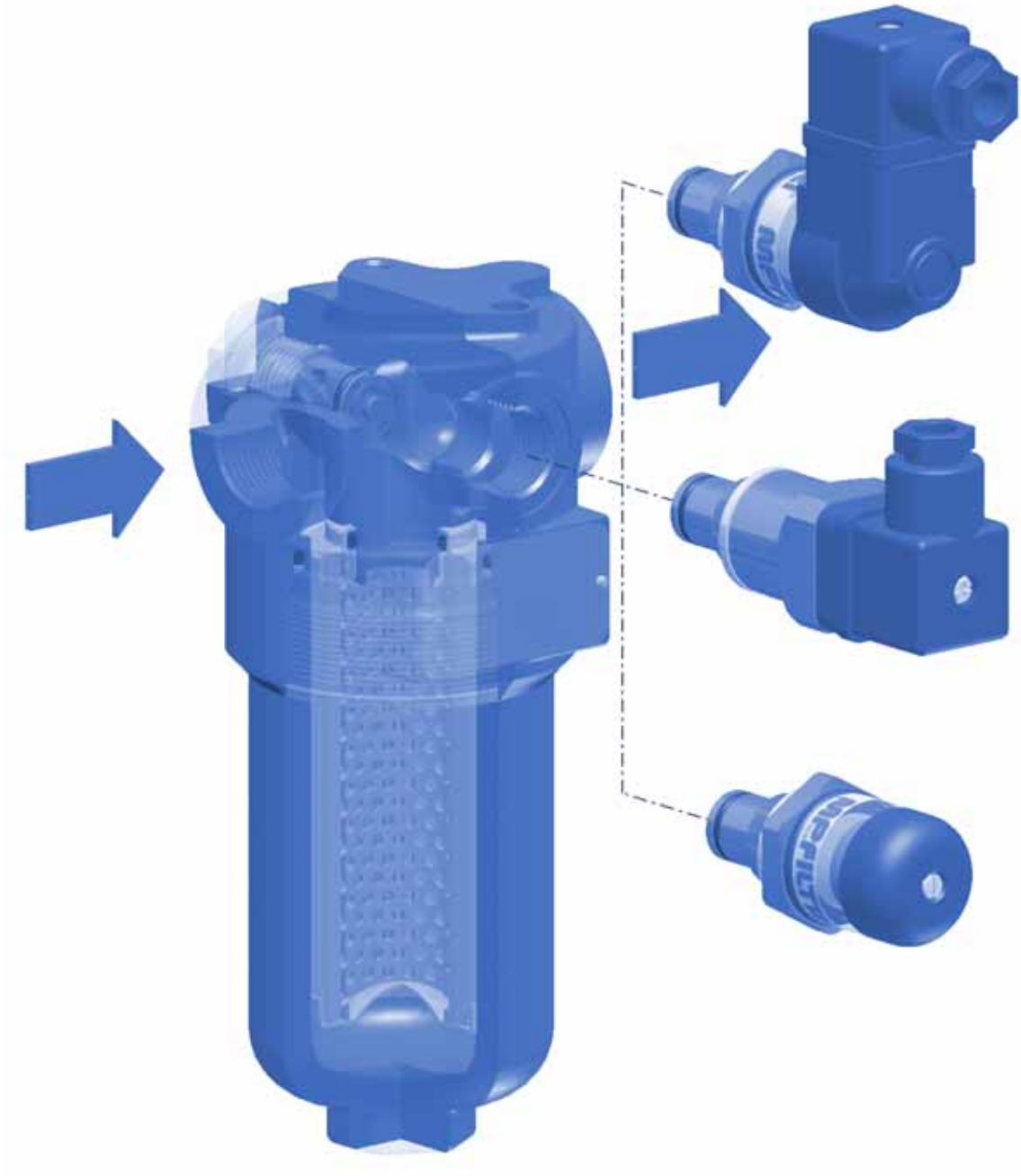
FMP

SERIES

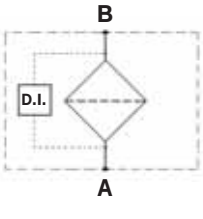
FMP

Working pressure

280 bar



Style S



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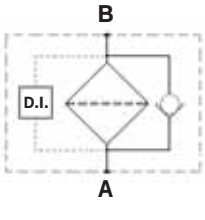

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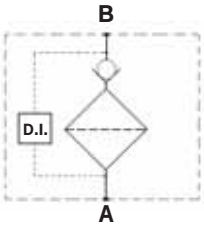

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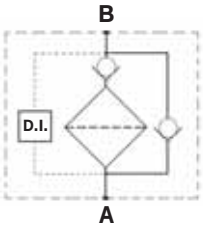

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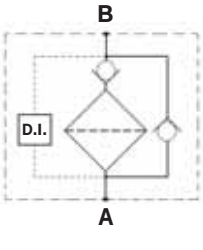
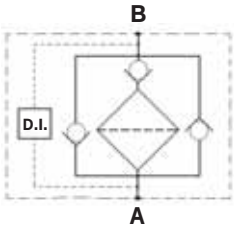


Style Z



Technical data

Filter body (Materials)

- Head: Cast iron (chemical heat treatment)
- Housing: Cast iron (chemical heat treatment)
- Bypass valve: Brass
- Reverse Flow: Steel (series 135 - 320 only)
- Check valve: Steel

Pressure

- Maximum operating pressure: 280 bar (28 MPa)
- Test pressure: 420 bar (42 MPa)
- Burst pressure: 840 bar (84 MPa)
- Pulsed pressure fatigue test 1,000,000 cycles with pressure from 0 to 280 bar (28 MPa)

Temperature

- From -25°C to +110°C

Bypass valve

- Opening pressure 6 bar ±10%
- Other opening pressures on request.

Elements type Δp

- Mircrofibre elements series N-R: 20 bar
- Elements in stainless steel mesh series N: 20 bar
- Elements in microfibre series H-S: 210 bar
- Oil flow from exterior to interior.

Seals

- Standard Nitrile (NBR) series A
- Optional FPM series V

Weights without filter elements (kg)

Length	1	2	3	4
• FMP 065	3.0	3.4	5.2	—
• FMP 135	6.0	8.2	12.0	—
• FMP 320	12.7	14.7	20.7	23.7

Filter internal volumes (dm^3)

Length	1	2	3	4
• FMP 065	0.38	0.45	0.67	—
• FMP 135	0.40	1.02	1.24	—
• FMP 320	1.61	2.61	3.27	4.20

Connections

In-line Inlet/Outlet

Compatibility

- Bodies compatible with:
  Mineral oils to ISO 2943 - aqueous emulsions
  Synthetic fluids, water/glycol.
- Filter elements compatible with:
  Mineral oils to ISO 2943 - aqueous emulsions
  Synthetic fluids, water/glycol.
- Nitrile (NBR) seals series A, compatible with:
  Mineral oils to ISO 2943 - aqueous emulsions
  Synthetic fluids, water/glycol.
- V series FPM seals, compatible with:
  Synthetic fluids type HS-HFDR-HFDS-HFDU.
  To ISO 2943

Filter Element Area

Filter element in stainless steel mesh

Type	Length 1	2	3	4
HP065	374	530	1064	-
HP135	950	2020	2700	-
HP320	1650	3645	5970	8280

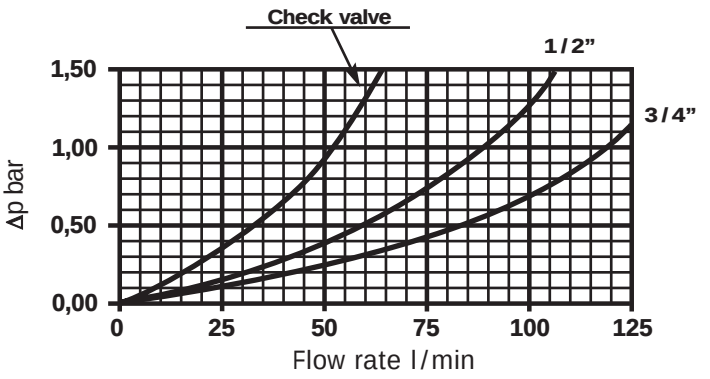
Values expressed in **cm^2**

Pressure drops Δp Housing

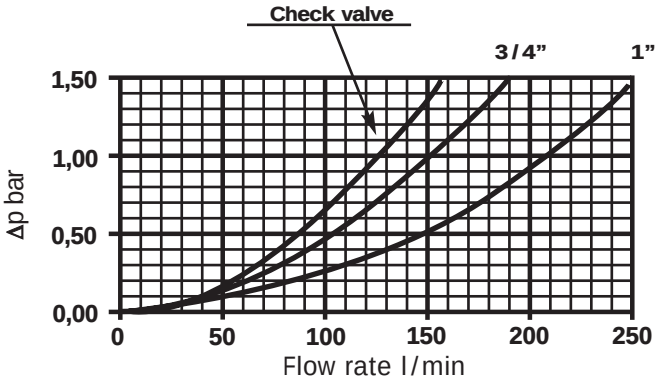
The curves are plotted using mineral oil with density of 0.86 kg/dm^3 to ISO 3968.

Δp varies proportional with density.

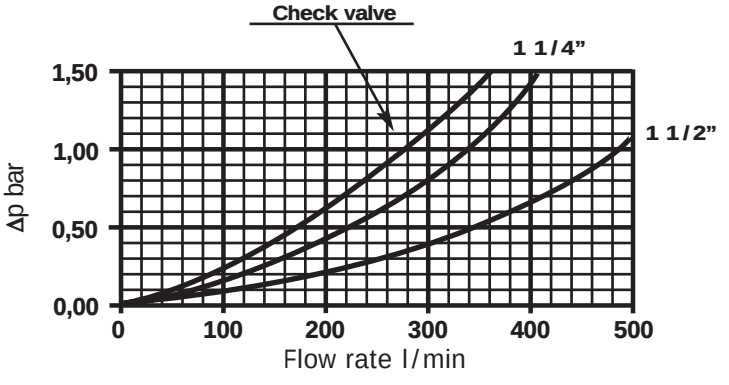
Filter Housing FMP 065



Filter Housing FMP 135



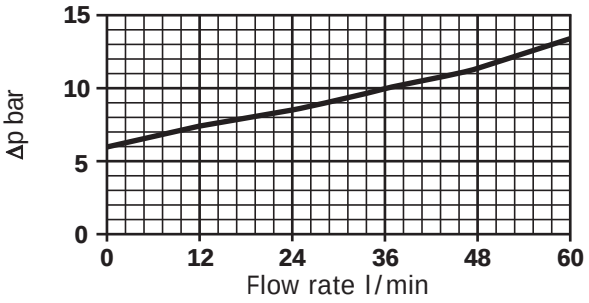
Filter Housing FMP 320



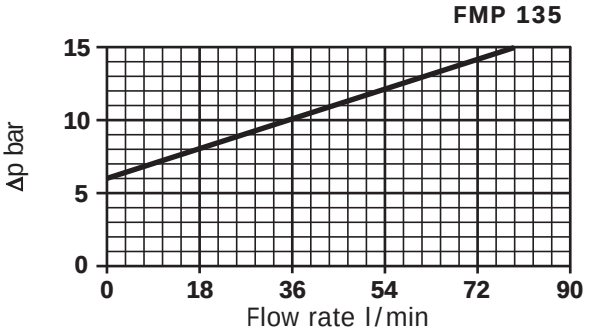
Valves

Bypass valve pressure drops

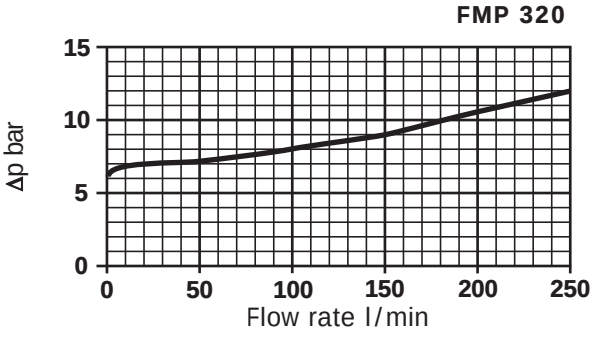
FMP 065



FMP 135

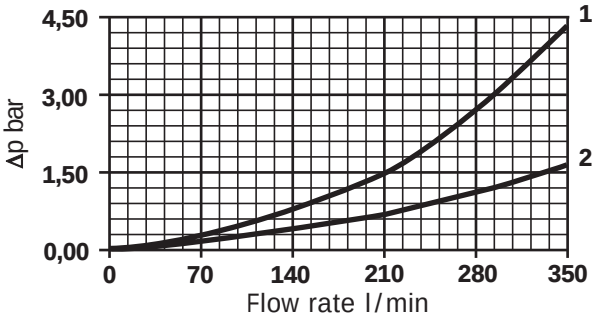


FMP 320



Pressure drop in reverse flow valves

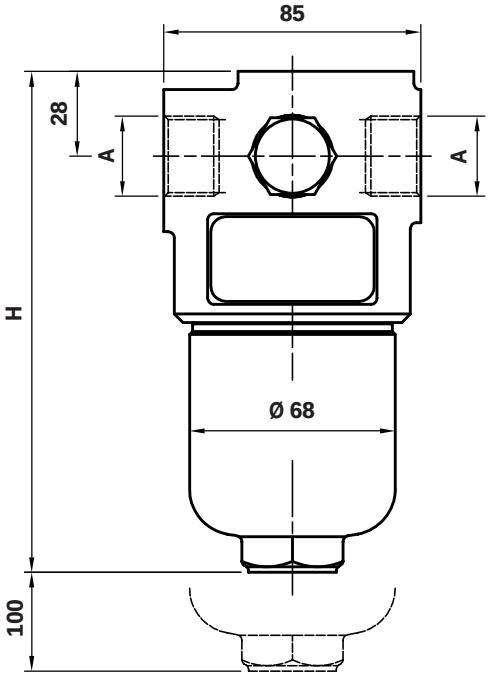
FMP 320



1 - Reverse Flow
2 - In filter direction

Dimensions

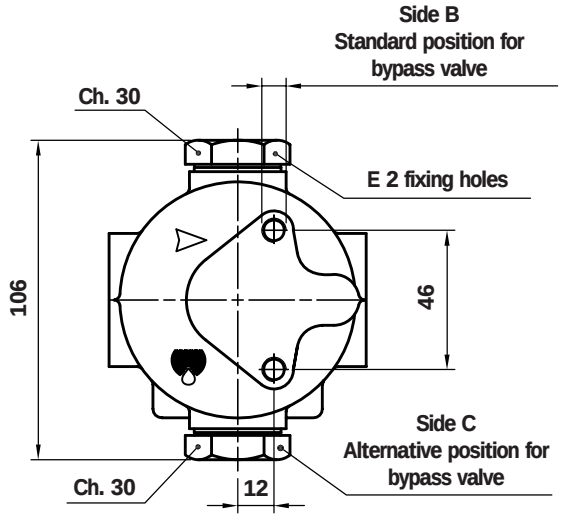
FMP 065



Recommended maximum flow rate

- Pressure drop of complete filter equal to Δp 1.5 bar.
- Oil kinematic viscosity 30 mm²/s (cSt).
- Density 0.86 kg/dm³.
- Connections of filter under test G 3/4".

Filter element type	Flow rate l/min Series N	Flow rate l/min Series H	Filter Length
A03	23	22	1
A06	30	23	
A10	48	43	
A16	53	50	
A25	72	68	
M25	105	-	
A03	31	30	2
A06	45	35	
A10	60	57	
A16	64	63	
A25	82	77	
M25	106	-	
A03	53	52	3
A06	61	58	
A10	79	78	
A16	84	83	
A25	94	93	
M25	108	-	

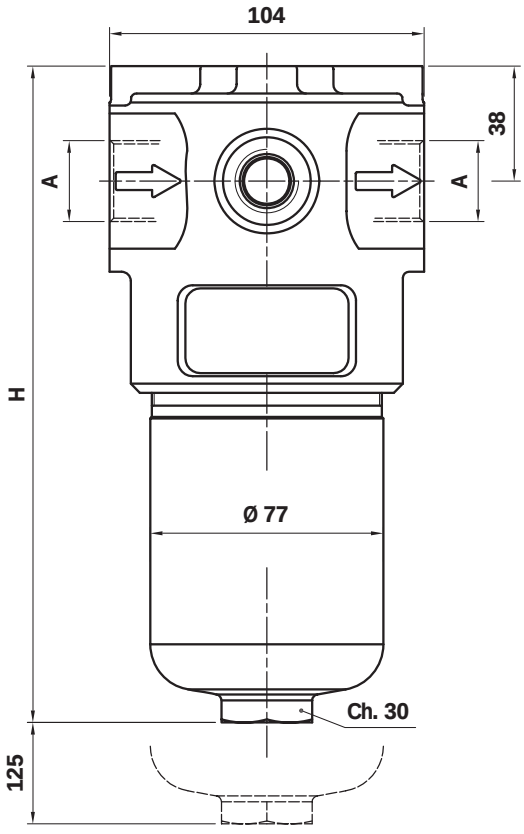


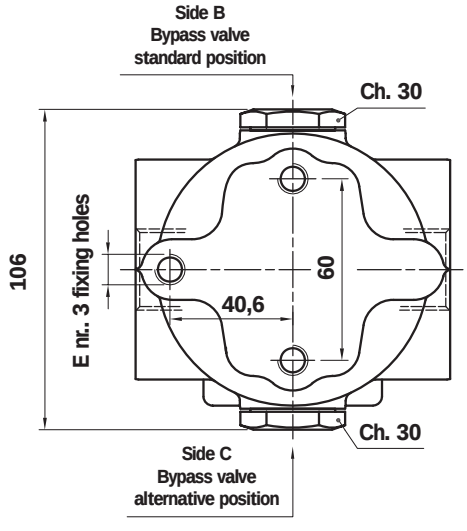
Indicator and bypass valve positions can be inverted.

A Threaded Connections	E Depth 15 mm
G 1/2"	M8
1/2" NPT	5/16" UNC
G 3/4"	M8
3/4" NPT	5/16" UNC
SAE 8 (3/4"- 16 UNF)	5/16" UNC
SAE 12 (1 1/16"- 12 UN)	5/16" UNC

Filter Length	H mm
1	169
2	200
3	302

FMP 135





Indicator and bypass valve positions can be inverted.

Recommended maximum flow rate

- Pressure drop of complete filter equal to Δp 1.5 bar.
- Oil kinematic viscosity 30 mm^2/s (cSt).
- Density 0.86 kg/dm^3.
- Connections of filter under test G 1".

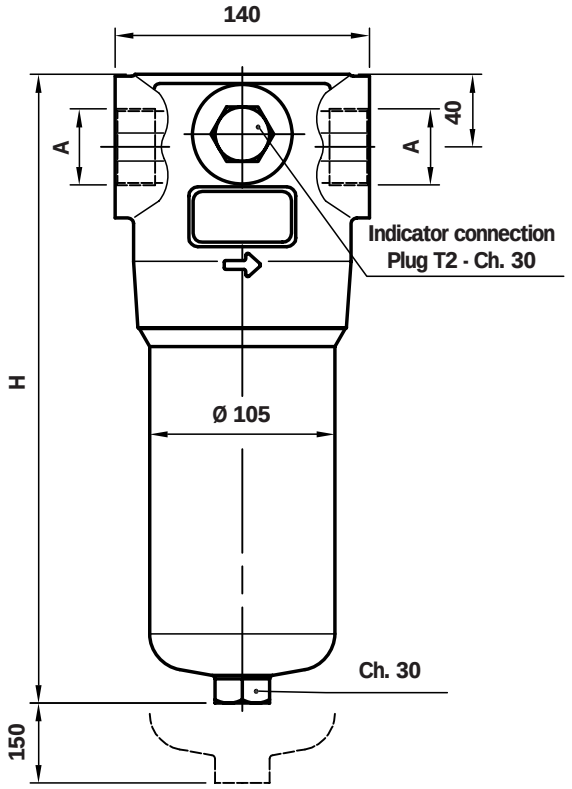
Filter element type	Flow rate l/min Series N	Flow rate l/min Series H	Filter Length
A03	69	50	
A06	74	57	
A10	120	98	1
A16	129	101	
A25	171	156	
M25	200	-	
A03	110	91	
A06	117	110	
A10	148	136	2
A16	151	139	
A25	208	175	
M25	230	-	
A03	150	126	
A06	153	140	
A10	192	170	3
A16	195	179	
A25	213	196	
M25	232	-	

A Threaded Connections	E Depth 15 mm
G 3/4"	M10
3/4" NPT	3/8" UNC
G 1"	M10
1" NPT	3/8" UNC
SAE 12 (1 1/16"- 12 UN)	3/8" UNC
SAE 16 (1 5/16"- 12 UN)	3/8" UNC

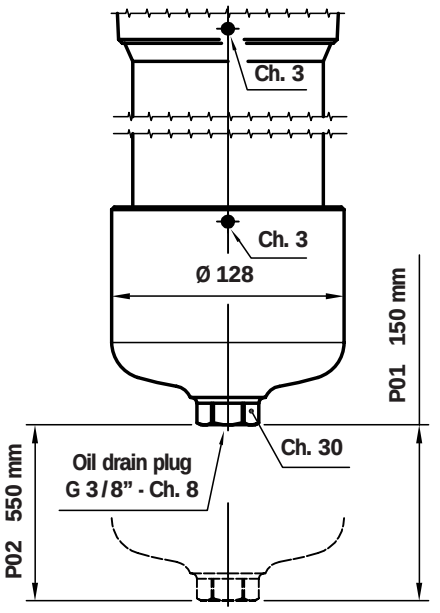
A Flanged Connections	B Depth 15 mm
3/4" SAE 3000 psi/M	M10
3/4" SAE 3000 psi/UNC	3/8" UNC
1" SAE 3000 psi/M	M10
1" SAE 3000 psi/UNC	3/8" UNC

Filter Length	H mm
1	220
2	333
3	408

FMP 320

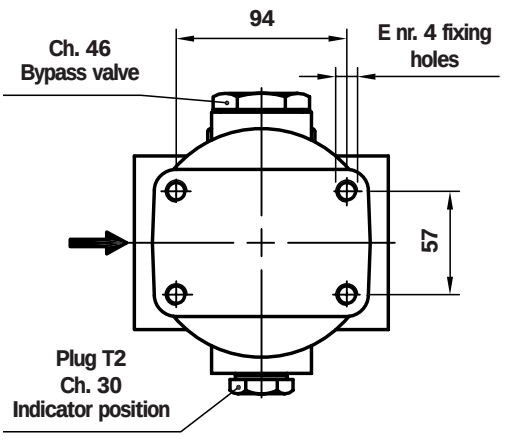


Only for FMP 320 length 4

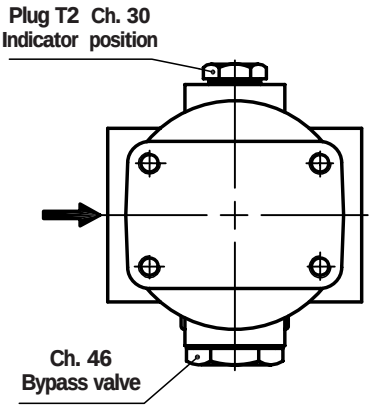


Style P01 standard maintenance from head.
Style P02 maintenance option from housing base.

Side B
Bypass valve standard position



Side C
Bypass valve alternative position



FMP 320

Recommended maximum flow rate

- Pressure drop of complete filter equal to Δp 1.5 bar.
- Oil kinematic viscosity 30 mm^2/s (cSt).
- Density 0.86 kg/dm^3.
- Connections of filter under test G 1 1/2".

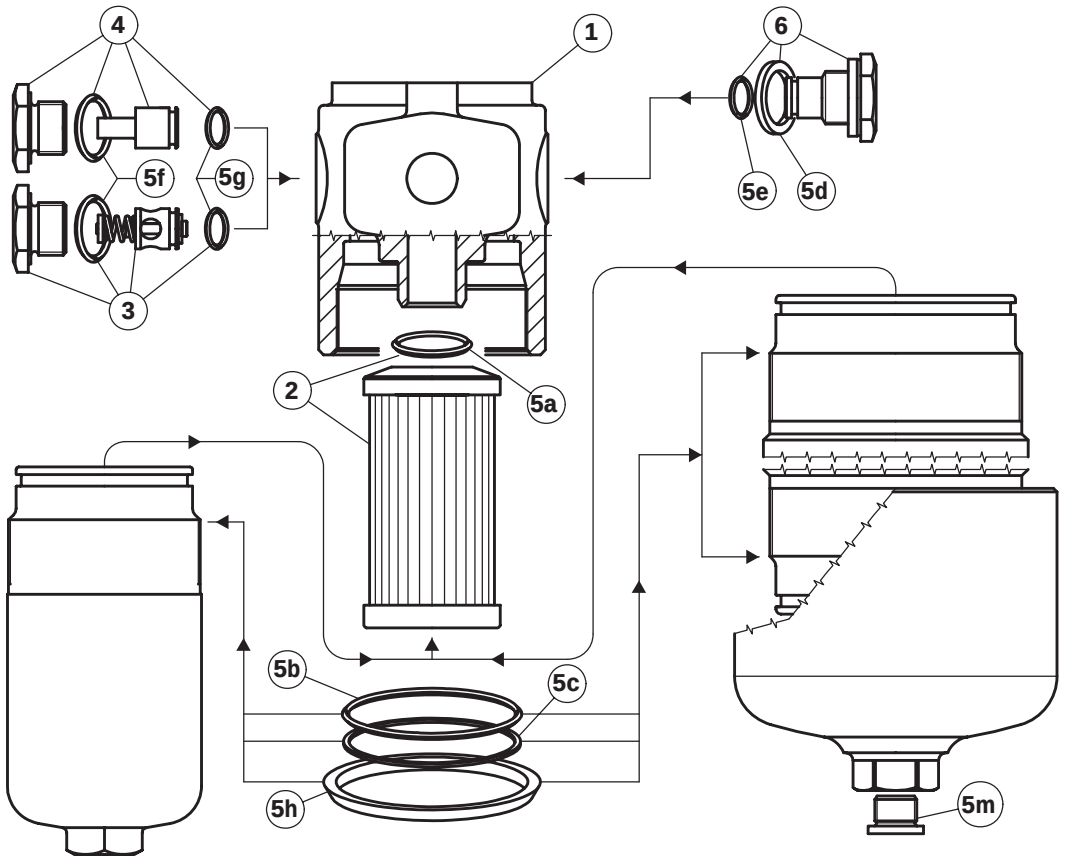
Filter element type	Flow rate l/min Series N	Flow rate l/min Series H	Filter Length
A03	126	107	
A06	137	112	
A10	230	185	1
A16	274	193	
A25	330	292	
M25	425	-	
A03	248	192	
A06	270	220	
A10	376	300	2
A16	395	312	
A25	440	378	
M25	445	-	
A03	319	255	
A06	353	300	
A10	427	367	3
A16	440	375	
A25	450	417	
M25	465	-	
A03	354	298	
A06	375	320	
A10	430	375	4
A16	447	382	
A25	467	422	
M25	475	-	

A Threaded Connections	E Depth 15 mm
G 1 1/4"	M12
1 1/4" NPT	1/2" UNC
G 1 1/2"	M12
1 1/2" NPT	1/2" UNC
SAE 20 (1 5/8" 12 UN)	1/2" UNC
SAE 24 (1 7/8" 12 UN)	1/2" UNC

A Flanged Connections	E Depth 15 mm
1 1/4" SAE 3000 psi/M	M12
1 1/4" SAE 3000 psi/UNC	1/2" UNC
1 1/2" SAE 3000 psi/M	M12
1 1/2" SAE 3000 psi/UNC	1/2" UNC

Filter Length	H mm
1	263
2	386
3	518
4	673

Spare parts FMP



Pos.	Description	Qty.	FMP Series FILTER 065 1 - 2 - 3		135 1 - 2 - 3		320 1 - 2 - 3 - 4	
1	Complete filter	1	See order table					
2	Filter element	1	See order table					
3	Bypass assembly	1	02001312 (NBR) 02001385 (FPM)				02001396 (NBR) 02001397 (FPM)	
4	Non bypass assembly	1	02001314 (NBR) 02001386 (FPM)				02001398 (NBR) 02001399 (FPM)	
5	Seal kits	1	NBR 02050267	FPM 02050278	NBR 02050293	FPM 02050294	NBR 02050274	FPM 02050285
5a	Filter element O-Ring	1	OR 4100 Ø 24.99 x 3.53		OR 3106 Ø 26.65 x 2.62		OR 144 Ø 39.69 x 3.53	
5b	O-Ring for housing	1	OR 159 Ø 55.56 x 3.53		OR 3256 Ø 64.77 x 2.62		2 pcs.	OR 3350 Ø 88.57 x 2.62
5c	Anti-extrusion ring	1	Parbak 227 Ø 54.53 x 3		Parbak 144 Ø 63.96 x 2.18		2 pcs.	Parbak 153 Ø 89.36 x 2.18
5d	Gasket	1	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)
5e	O-Ring	1	O-R 2050 Ø 12.42 x 1.78					
5f	Bp or Non Bp O-Ring	1	Bonded seal G 1/2" - FPM				O-R 3143 (NBR 90 Sh A) Ø 36,14 x 2,62	
5g	Bp or Non Bp O-Ring	1	OR 2050 Ø 12.42 x 1.78				OR 3106 Ø 26,65 x 2,62	
5h	Protective seal	1	01026521		01026509		01026510	
5m	Oil drain plug (not all model)	1	-		-		G 3/8" with bonded seal	
6	Indicator plug	1	T2H	T2V	T2H	T2V	T2H	T2V
-	Indicators	1	See order table					

Ordering information FMP

Filter assembly FMP

	1	2	3	4	5	6	7	8a
	☐	☐	☐	☐	☐	☐	☐	☐
Example: FMP	065	2	B	A	G1	A03	N	P01

Filter element HP

	1	2	6	4	7	8b
	☐	☐	☐	☐	☐	☐
Example: HP	065	2	A03	A	N	P01

1 - Size

- 065
- 135
- 320

2 - Filter length

- 1
- 2
- 3
- 4 (only for FMP 320)

3 - Valves

- S — Without bypass side B - Optional
- B — With bypass side B - Standard
- C — With bypass side C - Optional
- D — With bypass side B + check valve*
- V — With Reverse Flow* (Only for size 320)
- Z — With Reverse Flow + bypass* (Only for size 320)
- T — Without bypass + check valve*
- E — Without bypass side C - Optional

*Reduced cross-section oilways

4 - Seals

- A — NBR
- V — FPM

5 - Connections

Type	065	135	320
G1	G 1/2"	G 3/4"	G 1 1/4"
G2	G 3/4"	G 1"	G 1 1/2"
G3	1/2" NPT	3/4" NPT	1 1/4" NPT
G4	3/4" NPT	1" NPT	1 1/2" NPT
G5	SAE 8 (3/4" 16 UNF)	SAE 12 (1 - 1/16" 12 UN)	SAE 20 (1 5/8" 12 UN)
G6	SAE 12 (1 - 1/16" 12 UN)	SAE 16 (1 - 5/16" 12 UN)	SAE 24 (1 7/8" 12 UN)
F1	-	3/4" SAE 3000 PSI/M	1 - 1/4" SAE 3000 PSI/M
F2	-	1" SAE 3000 PSI/M	1 - 1/2" SAE 3000 PSI/M
F3	-	3/4" SAE 3000 PSI/UNC	1 - 1/4" SAE 3000 PSI/UNC
F4	-	1" SAE 3000 PSI/UNC	1 - 1/2" SAE 3000 PSI/UNC

6 - Filter elements

- A03 — Inorganic microfibre 3 µ
- A06 — Inorganic microfibre 6 µ
- A10 — Inorganic microfibre 10 µ
- A16 — Inorganic microfibre 16 µ
- A25 — Inorganic microfibre 25 µ

ßx (c) ≥ 1000
See page 10

- M25 — Stainless steel mesh 25 µ (style N only)

7 - Filter elements collapse pressure

- N — 20 bar
- H — 210 bar
- R — 20 bar (Filter with reverse flow + bypass)
- S — 210 bar (Filter with reverse flow)

8 - Options

a) Filter

- P01 — MP Standard filters
- P02 — Maintenance from housing base (only for FMP 320 - 4)
- Pxx — Customer request

b) Filter element

- P01 — MP Filtri standard
- Pxx — Customer request

DIFFERENTIAL INDICATORS (see page 15)

MP Filtri - The filter functions as described in this bulletin are valid exclusively for original MP Filtri filter elements and replacement parts. All rights reserved

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